

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A mechanical fuse composed of Fe-based sintered alloy, wherein the roundness of pores of the Fe-based sintered alloy is 0.004 or more.
2. (Canceled)
3. (Currently Amended) The mechanical fuse according to~~in accordance with~~ claim 1, wherein an iron oxide phase is formed in a surface layer and pore inner wall.
4. (Currently Amended) The mechanical fuse according to~~in accordance with~~ claim 1, wherein at least one of Ni, Cu, Mo, Cr, and Mn is contained ~~by~~ in a total amount of 0.7 to 5 mass %, and the C content in overall composition is 0.1 to 0.7 mass %.
5. (Currently Amended) The mechanical fuse according to~~in accordance with~~ claim 1, wherein a treatment for providing residual compressive stress is applied.
6. (Currently Amended) The mechanical fuse according to~~in accordance with~~ claim 5, wherein the treatment for providing residual compressive stress is shot peening.
7. (Currently Amended) The mechanical fuse according to~~in accordance with~~ claim 5, wherein the treatment for providing residual compressive stress is mechanical plating.
8. (Currently Amended) The mechanical fuse according to~~in accordance with~~ claim 1, wherein a soft nitriding treatment is applied.
9. (Currently Amended) The mechanical fuse according to~~in accordance with~~ claim 1, wherein a zinc chromate film is coated on the surface.
10. (Currently Amended) The mechanical fuse according to~~in accordance with~~ claim 1, wherein this mechanical fuse is interposed between two power transmission shafts and comprises an inner rim fixed to one power transmission shaft, an outer rim fixed to the

other power transmission shaft, and plural arms for linking the inner rim and outer rim, which are formed integrally.

11. (Withdrawn) A manufacturing method of mechanical fuse comprising:

a compression step for compressing a mixed powder of iron powder, and nickel powder, copper powder, molybdenum powder, ferromanganese powder, or ferrochromium powder so that the content of at least one element of Ni, Cu, Mo, Cr, and Mn, is 0.7 to 5 mass %, and graphite powder so that the C content is 0.1 to 0.7 mass %, into a specified shape; and

a sintering step for sintering the green compact obtained at the compression step, in a non oxidation atmosphere.

12. (Withdrawn) The manufacturing method of mechanical fuse in accordance with claim 11, wherein the sintering step is followed by a steam treating step for treating the sintered compact in steam.

13. (Withdrawn) The manufacturing method of mechanical fuse in accordance with claim 11, wherein the sintering step or steam treating step is followed by a soft nitriding step.

14. (Withdrawn) The manufacturing method of mechanical fuse in accordance with claim 11, wherein a compressive residual stress is provided among or after the sintering step, steam treating step, or soft nitriding step.

15. (Withdrawn) The manufacturing method of mechanical fuse in accordance with claim 11, further comprising a final step for laminating a film of zinc or zinc-iron alloy flaky particles on the surface by mechanical plating, immersing in an aqueous disperse solution containing metal zinc flakes, chromic acid anhydride, and glycol, and heating to coat the surface with a zinc chromate film.